

M In the embodiment shown in FIGS. 5-6 a hydrodynamic bearing 118 is used. Hydrodynamic bearings can be air bearings. The fluid used in hydrodynamic bearings can be either a liquid or gas. The bearing 118 concentrically surrounds a substantial portion of the shaft. In the embodiment shown in Fig. 5, the hydrodynamic bearing 118 is made of an inner first portion and outer second portion, the inner first portion being fixed to the shaft 116 and the outer second portion being fixed to the body 114. Alternatively, ball bearings such as the ones shown in the first embodiment could be used in the second embodiment. Finally, in the second embodiment the inner portion 130 of the body 114 does not extend through the entire length of the body 114, although in an alternate embodiment it could. The second embodiment may be made and used in a similar manner as the first embodiment. This embodiment has the advantages discussed above in conjunction with the first embodiment. The use of a hydrodynamic bearing is possible because there is less stress on the bearing case, as well as the fact that this motor is easier to assemble. The use of a hydrodynamic bearings provides less friction, less wear resistance and hence a longer bearing life, less vibration and the capability to operate at higher speeds.

REMARKS

The amendment does not involve new matter. The changes to the specification correct a typographical error and add a sentence describing the structure of the hydrodynamic bearing shown in Fig. 5. The changes to the above paragraph from the previous version to the rewritten version are shown in Appendix A, with deleted matter shown in brackets and added matter underlined.

Examiner Lam is thanked for the courtesy of the telephone interview with Applicant's attorney on February 2 and 8, 2001. During the interview no claim amendments were proposed and no prior art was discussed. The thrust of the principal argument is presented below. No agreement was reached.